



United States Department of Agriculture
Natural Resources Conservation Service

Water Management Enhancement Activity – Irrigation Management

Irrigation Management

Irrigation management decisions have a significant influence on water use, irrigation efficiency, energy use, and production. Irrigation management has a great effect on water resources and provides other natural resource benefits.

Benefits

Enhancement activities associated with irrigation management can improve irrigation system and water use efficiencies resulting in optimization of water resources while promoting desired plant response. Enhancement activities could also minimize soil erosion, minimize plant nutrient loss, protect water quantity and quality, improve soil and water quality, reduce erosion, enhance wildlife habitat, and conserve energy.

Criteria for Irrigation Management Enhancement Activity

This enhancement requires the implementation and maintenance of irrigation management and conservation practices that address the water needs, the intensity, frequency, timing and duration of irrigation.

In order to qualify for this enhancement the initial Irrigation Enhancement Index must be at least 50%. Additional irrigation management and/or conservation practices will be implemented in order to improve the irrigation index. The increase in irrigation index as a result of system enhancements will be evaluated by an NRCS employee utilizing the Irrigation Enhancement Index tool to compute a revised Irrigation Enhancement Index. The revised Irrigation Enhancement Index will categorize the enhancement at Levels 1 through 6:

- Irrigation Management – Level 1 Irrigation Index 60-64
- Irrigation Management – Level 2 Irrigation Index 65-69
- Irrigation Management – Level 3 Irrigation Index 70-74
- Irrigation Management – Level 4 Irrigation Index 75-79
- Irrigation Management – Level 5 Irrigation Index 80-84
- Irrigation Management – Level 6 Irrigation Index 85+

Irrigation management activities applicable to this enhancement may include:

- Installation and/or monitoring of flow measurement devices (manually, automatically or remotely)
- Utilizing soil moisture monitoring, irrigation scheduling or other decision support tools to aid in irrigation management decisions.
- Improving and/or replacing existing irrigation systems with more efficient systems.
- Improving the soil condition index.
- Improving on-farm water distribution.
- Improving individual field water distribution by performing land smoothing, land leveling, or installing a more efficient field distribution system.



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- Installation of a tailwater recovery system including all facilities needed for collection, storage, and transportation of irrigation tailwater and/or rainfall runoff to conserve irrigation water supplies and/or improve offsite water quality.

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1. Irrigation Enhancement Index – Level 1

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool. Irrigation Enhancement Index value of 60-64%.

2. Irrigation Enhancement Index – Level 2

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool. Irrigation Enhancement Index value of 65-69%.

3. Irrigation Enhancement Index – Level 3

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool. Irrigation Enhancement Index value of 70-74%.

4. Irrigation Enhancement Index – Level 4

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool. Irrigation Enhancement Index value of 75-79%.

5. Irrigation Enhancement Index – Level 5

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool. Irrigation Enhancement Index value of 80-84%.

6. Irrigation Enhancement Index – Level 6

This enhancement activity requires an initial minimum Irrigation Enhancement Index of 50% to be eligible for this enhancement. The required elements could be any combination of management and/or conservation practices that will achieve the required Irrigation Enhancement



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Index as computed by an NRCS employee utilizing the Irrigation Enhancement Index tool.
Irrigation Enhancement Index value of 85% or greater.

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Reference:

Natural Resources Conservation Service, National Engineering Handbook, Part 652, Irrigation Guide, 1996.

Natural Resources Conservation Service, Farm Irrigation Rating Index, User Manual, Version 1.2, 9/06

Natural Resources Conservation Service Irrigation Water Management (IWM) Assessment Tool